Amendments to the Claims:

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claims 1-7. (Cancelled)

Claim 8. (New) An integrated circuit comprising:

a memory interface to read data from and write data to an external memory;

a scan/z engine coupled to the memory interface, wherein the scan/z engine receives vertex coordinates and determines visible fragments in screen-space tiles;

a rasterizer coupled to receive visible fragments from the scan/z engine, wherein the rasterizer rasterizes fragments in screen-space tiles; and

a shader coupled to the rasterizer,

wherein when the scan/z engine is determining visible fragments in a first screen-space tile, the rasterizer rasterizes fragments in a second screen-space tile.

Claim 9. (New) The integrated circuit of claim 8 wherein the scan/z engine performs a double-z scan.

Claim 10. (New) The integrated circuit of claim 9 wherein the double-z scan comprises:

performing first and second functions to determine visibility information from a first plurality of primitives, the first function comprising:

receiving the first plurality of primitives including a plurality of vertices and vertices connectivity information, each vertex including x, y, and z coordinates;

scan converting the first plurality of primitives to determine z values for each x and y location in a screen-space tile;

comparing z values for each primitive in the first plurality of primitives at each x and y location; and

storing a z value for each x and y location; and

performing the second function, the second function comprising:

receiving the first plurality of primitives including a plurality of vertices and vertices connectivity information, each vertex including x, y, and z coordinates;

scan converting the first plurality of primitives to determine z values for each x and y location in the screen-space tile; and

comparing the determined z values to the stored z value at each x and y location.

Claim 11. (New) The integrated circuit of claim 10 wherein the each of the first plurality of primitives are opaque.

Claim 12. (New) The integrated circuit of claim 11 wherein the double-z scan further comprises:

receiving a second plurality of primitives, where the second plurality of primitives are transparent;

scan-converting the second plurality of primitives to determine z values for each x and y location in the screen-space tile; and

comparing the determined z values to the stored z value at each x and y location.

Claim 13. (New) The integrated circuit of claim 10 further comprising a first-in first-out memory coupled between the scan/z engine and the rasterizer.

Claim 14. (New) The integrated circuit of claim 10 wherein the memory interface is further configured to access a plurality of memory locations addressable using a plurality of memory addresses to form a first-in first-out memory coupled between the scan/z engine and the rasterizer.

Claim 15. (New) The integrated circuit of claim 10 wherein the memory interface is configured to receive screen x, y, and z coordinates from a first plurality of memory locations addressable using a first plurality of memory addresses and to provide the

screen x, y, and z coordinates to the scan/z engine, and the memory interface is further configured to receive surface parameters from a second plurality of memory locations addressable using a second plurality of memory addresses and to provide the surface parameters to the rasterizer.

Claim 16. (New) The integrated circuit of claim 15 wherein the surface parameters comprise parameters other than x, y, and z coordinates.

Claim 17. (New) The integrated circuit of claim 16 wherein the memory interface is further configured to receive textures from a third plurality of memory locations addressable using a third plurality of memory addresses and to provide the textures to the shader.

Claim 18. (New) The integrated circuit of claim 17 wherein the shader is coupled to a blender.

Claim 19. (New) An integrated circuit comprising:

a scan/z engine, wherein the scan/z engine receives vertex coordinates and determines visible fragments;

a rasterizer coupled to receive visible fragments from the scan/z engine, wherein the rasterizer rasterizes fragments;

a shader coupled to the rasterizer; and

a memory coupled to the rasterizer and shader, wherein the memory stores frame buffer data for a plurality of pixels while the rasterizer rasterizes fragments for the plurality of pixels.

Claim 20. (New) The integrated circuit of claim 19 wherein the scan/z engine determines visible fragments in screen-space tiles and the rasterizer rasterizes fragments in the screen-space tiles.

Claim 21. (New) The integrated circuit of claim 20 wherein the memory stores frame buffer data for a screen-space tile while the rasterizer rasterizes fragments in the screen-space tile.

Claim 22. (New) The integrated circuit of claim 18 wherein the plurality of pixels comprises a screen-space tile.

Claim 23. (New) An integrated circuit comprising:

a memory interface coupled to receive vertex x, y, and z coordinates without receiving surface parameters from a first plurality of memory locations addressable using a first plurality of addresses, and further coupled to receive surface parameters from a second plurality of memory locations addressable using a second plurality of addresses;

a scan/z engine coupled to receive the vertex x, y, and z coordinates from the memory interface, wherein the scan/z engine determines visibility information; and

a rasterizer coupled to the scan/z engine and coupled to receive the surface parameters from the memory interface and visible fragments from the scan/z engine.

Claim 24. (New) The integrated circuit of claim 23 wherein the scan/z engine determines visibility information by:

performing first and second functions on a plurality of primitives, the first function comprising:

receiving the plurality of primitives including a plurality of vertices and vertices connectivity information, each vertex including x, y, and z coordinates;

scan converting the plurality of primitives to determine z values for each x and y location in a screen-space tile;

comparing z values for each primitive in the plurality of primitives at each x and y location; and

storing a z value for each x and y location; and

performing the second function, the second function comprising:

receiving the plurality of primitives including a plurality of vertices and vertices connectivity information, each vertex including x, y, and z coordinates;

scan converting the plurality of primitives to determine z values for each x and y location in the screen-space tile; and

comparing the determined z values to the stored z value at each x and y location.

Claim 25. (New) The integrated circuit of claim 23 wherein the surface parameters comprise parameters other than x, y, and z coordinates.

Claim 26. (New) The integrated circuit of claim 25 wherein the x, y, and z coordinates comprise a portion of a screen x, y, and z stream, and the screen x, y, and z steam further includes mode information related to scan conversion and depth operations.

Claim 27. (New) The integrated circuit of claim 26 wherein screen x, y, and z coordinates are added to the visibility information determined by the scan/z engine.